

BookletChart™

Toledo Harbor

NOAA Chart 14847

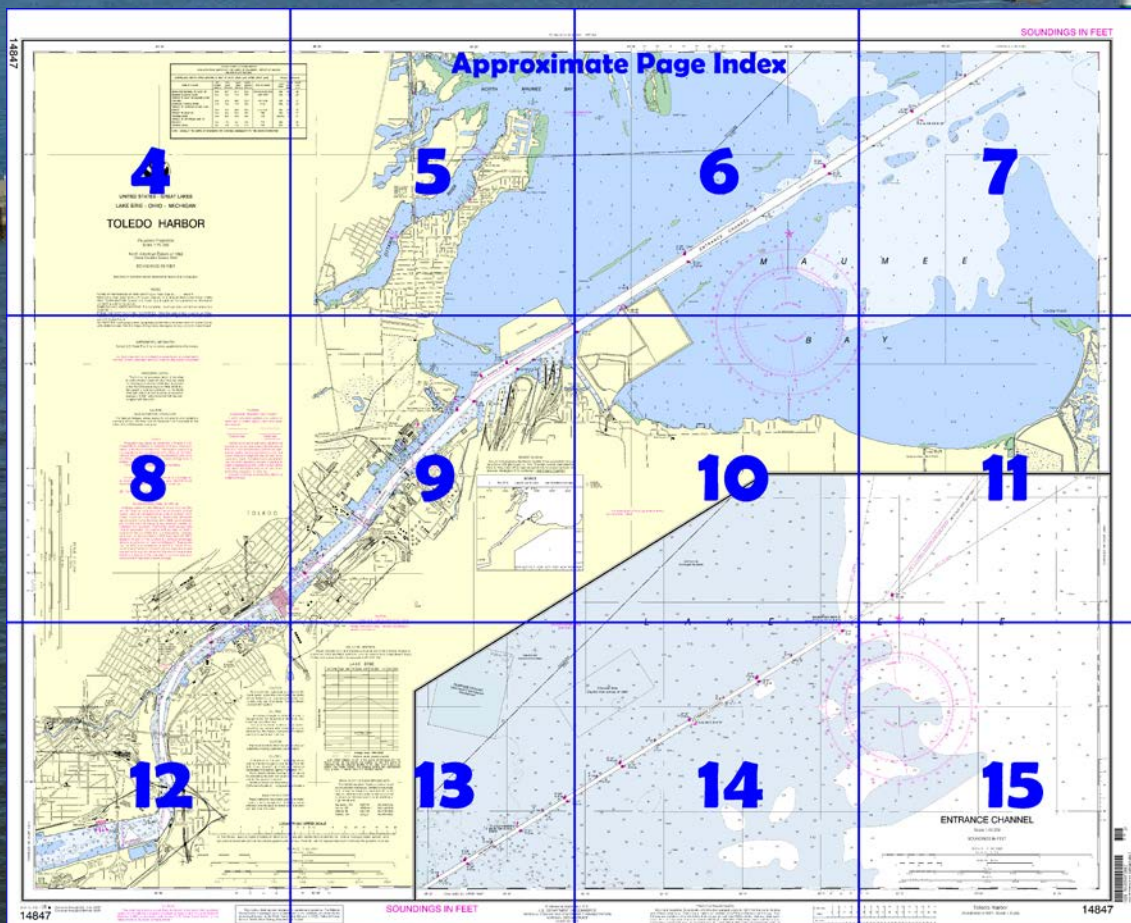


A reduced-scale NOAA nautical chart for small boaters

When possible, use the full-size NOAA chart for navigation.



- Complete, reduced-scale nautical chart
- Print at home for free
- Convenient size
- Up-to-date with Notices to Mariners
- Compiled by NOAA's Office of Coast Survey, the nation's chartmaker



**Published by the
National Oceanic and Atmospheric Administration
National Ocean Service
Office of Coast Survey
www.NauticalCharts.NOAA.gov
888-990-NOAA**

What are Nautical Charts?

Nautical charts are a fundamental tool of marine navigation. They show water depths, obstructions, buoys, other aids to navigation, and much more. The information is shown in a way that promotes safe and efficient navigation. Chart carriage is mandatory on the commercial ships that carry America's commerce. They are also used on every Navy and Coast Guard ship, fishing and passenger vessels, and are widely carried by recreational boaters.

What is a BookletChart™ ?

This BookletChart is made to help recreational boaters locate themselves on the water. It has been reduced in scale for convenience, but otherwise contains all the information of the full-scale nautical chart. The bar scales have also been reduced, and are accurate when used to measure distances in this BookletChart. See the Note at the bottom of page 5 for the reduction in scale applied to this chart.

Whenever possible, use the official, full scale NOAA nautical chart for navigation. Nautical chart sales agents are listed on the Internet at <http://www.NauticalCharts.NOAA.gov>.

This BookletChart does NOT fulfill chart carriage requirements for regulated commercial vessels under Titles 33 and 44 of the Code of Federal Regulations.

Notice to Mariners Correction Status

This BookletChart has been updated for chart corrections published in the U.S. Coast Guard Local Notice to Mariners, the National Geospatial Intelligence Agency Weekly Notice to Mariners, and, where applicable, the Canadian Coast Guard Notice to Mariners. Additional chart corrections have been made by NOAA in advance of their publication in a Notice to Mariners. The last Notices to Mariners applied to this chart are listed in the Note at the bottom of page 7. Coast Pilot excerpts are not being corrected.

For latest Coast Pilot excerpt visit the Office of Coast Survey website at <http://www.nauticalcharts.noaa.gov/nsd/searchbychart.php?chart=14847>



(Selected Excerpts from Coast Pilot)

Detroit River Light (42°00.0'N., 83°08.5'W.), 55 feet above the water, is shown from a white conical tower, upper part black, on a hexagonal pier in the entrance to the Detroit River E of Pointe Mouillee. A fog signal and racon are at the light.

The **Detroit River** flows S from Lake St. Clair and empties into the NW end of Lake Erie.

East Outer Channel and West Outer

Channel, dredged and well marked, lead northward through the shallows at the upper end of Lake Erie to the mouth of the Detroit River.

Immediately N of Detroit River Light, the channels merge to form lower Livingstone Channel. In June 1999, East Outer Channel had a controlling depth of 24 feet (28 feet at midchannel). In 1987, West Outer Channel had a controlling depth of 16 feet for a midwidth of 700 feet.

The channel is well marked with lights and buoys. **Ballards Reef Channel Light 77D** (42°08.5'N., 83°07.5'W.) marks the W side of the downbound turn into the entrance to Livingstone Channel at its junction with Ballards Reef Channel. Because of the strong E set of the current at the junction of Livingstone and Ballards Reef Channels, mariners are advised to favor the W side, if draft permits.

Bois Blanc Island, Ont., popularly known as Bob-Lo Island, is in the lower part of the Detroit River, close to the Canadian mainland and separated from it by Amherstburg Channel. The island is a large amusement park. A marina on the W side of the island has water and electricity. Ferries connect the island with Amherstburg, Ont., and Detroit, Mich.

W of the lower end of the revetments in Livingstone Channel, a small-craft channel marked by buoys leads from the open part of the lower Detroit River between **Sugar Island** and **Meso Island**, along the Grosse Ile shore, and thence W of **Stony Island**. In the narrow part of this channel between Stony Island and Grosse Ile, a line of submerged bridge abutments, with least depths of ½ foot, crosses the channel, and submerged cables follow the same path just to the S and N of the abutments. A buoy marks the W side of the westernmost abutment, and in 1977, the best water was inside the buoy within 150 to 200 feet of the Grosse Ile shore. The W abutment is about 280 feet from shore.

of **Celeron Island** and connects with Trenton Channel at Gibraltar. The least depth in this channel is about 8 feet.

Fighting Island Channel extends from the upper end of Ballards Reef Channel, about 2 miles below the head of Grosse Ile, along the W side of Fighting Island to the natural deep water N of Fighting Island. A Federal project provides for a depth of 28.5 feet in Fighting Island Channel. (See Notice to Mariners and latest edition of charts for controlling depths.)

Fighting Island, Ont., on the E side of Fighting Island Channel off the Ontario mainland, is about 4 miles long and about 0.5 mile wide. The entire island is either marsh or waste bed fill from various concerns that pump manufacturing residue to the island as waste. Low bluffs are on the Water level information for the Gibraltar area may be obtained by contacting Detroit Coast Guard Group on VHF-FM channel 16. The same information is given at the beginning of the scheduled radio broadcast notice to mariners.

Because of current effects, mariners are advised to exercise caution when turning from Hackett Reach into Amherstburg Reach. Canadian regulations specify a **speed limit** of 10 knots in Livingstone Channel for vessels of 500 gross tons and over.

Caution.—Extra care is necessary when anchoring in Amherstburg Channel between its upper end and the south end of Bois Blanc Island; the current may cause an anchor to drag and overturn rocks which then become obstructions.

A submerged water intake north of the front structure of the Fort Malden range extends 300 feet (91.4 m) into the river.

Regulations.—A **speed limit** of 4 mph is enforced in River Rouge and Short Cut Canal 21. (See **33 CFR 162.130 through 162.140**, chapter 2, for navigation regulations.)

Detroit is a **customs port of entry**.

Quarantine is enforced in accordance with the regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.)

**U.S. Coast Guard Rescue Coordination Center
24 hour Regional Contact for Emergencies**

RCC Cleveland

Commander

9th CG District

Cleveland, OH

(216) 902-6117

Table of Selected Chart Notes

Ⓟ Pump-out facilities

HORIZONTAL DATUM

The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83), which for charting purposes is considered equivalent to the World Geodetic System 1984 (WGS 84). Geographic positions referred to the North American Datum of 1927 must be corrected an average of 0.185" northward and 0.249" eastward to agree with this chart.

CAUTION

Temporary changes or defects in aids to navigation are not indicated on this chart. See Local Notice to Mariners.

During some winter months or when endangered by ice, certain aids to navigation are replaced by other types or removed. For details see U.S. Coast Guard Light List.

CAUTION

Due to periodic high water conditions in the Great Lakes, some features charted as visible at Low Water Datum may be submerged, particularly in the near shore areas. Mariners should proceed with caution.

CAUTION

Improved channels shown by broken lines are subject to shoaling, particularly at the edges.

BADAR REFLECTORS

Radar reflectors have been placed on many floating aids to navigation. Individual radar reflector identification on these aids has been omitted from this chart.

NOAA WEATHER RADIO BROADCASTS

The NOAA Weather Radio stations listed below provide continuous weather broadcasts. The reception range is typically 20 to 40 nautical miles from the antenna site, but can be as much as 100 nautical miles for stations at high elevations.

Sandusky, OH	KHB-97	162.400 MHz
Adrian, MI	WNG-647	162.450 MHz
Detroit, MI	KEC-63	162.550 MHz
Toledo, OH	WXL-51	162.550 MHz

CAUTION

Limitations on the use of radio signals as aids to marine navigation can be found in the U.S. Coast Guard Light Lists and National Geospatial-Intelligence Agency Publication 117.

Radio direction-finder bearings to commercial broadcasting stations are subject to error and should be used with caution.

Station positions are shown thus:

⊙ (Accurate location) ○ (Approximate location)

CAUTION

SUBMARINE PIPELINES AND CABLES

Charted submarine pipelines and submarine cables and submarine pipeline and cable areas are shown as:

Pipeline Area Cable Area

Additional uncharted submarine pipelines and submarine cables may exist within the area shown on this chart. Not all submarine pipelines and submarine cables are required to be buried, and those that were originally buried may have become exposed. Mariners should use extreme caution when operating vessels in depths of water comparable to their draft in areas where pipelines and cables may exist, and when anchoring, dragging, or trawling.

Covered wells may be marked by lighted or unlighted buoys.

NOTE Z

NO-DISCHARGE ZONE, 40 CFR 140

Michigan waters of Lakes Michigan, Huron, Superior, Erie and St. Clair, all waterways connected thereto, and all inland lakes are designated as a No-Discharge Zone (NDZ). Under the Clean Water Act, Section 312, all vessels operating within a No-Discharge Zone (NDZ) are completely prohibited from discharging any sewage, treated or untreated, into the waters. Commercial vessel sewage shall include graywater. All vessels with an installed marine sanitation device (MSD) that are navigating, moored, anchored, or docked within a NDZ must have the MSD disabled to prevent the overboard discharge of sewage (treated or untreated) or install a holding tank. Regulations for the NDZ are contained in the U.S. Coast Pilot. Additional information concerning the regulations and requirements may be obtained from the Environmental Protection Agency (EPA) web site: http://www.epa.gov/owow/oceans/regulatory/vessel_sewage/.

WARNING

The prudent mariner will not rely solely on any single aid to navigation, particularly on floating aids. See U.S. Coast Guard Light List and U.S. Coast Pilot 6 for details.

NOTE A

Navigation regulations are published in Chapter 2, U.S. Coast Pilot 6. Additions or revisions to Chapter 2 are published in the Notice to Mariners. Information concerning the regulations may be obtained at the Office of the Commander, 9th Coast Guard District in Cleveland, Ohio or at the Office of the District Engineer, Corps of Engineers in Buffalo, New York.

Refer to charted regulation section numbers.

Low Water Datum, which is the plane of reference for the levels shown on the above hydrograph, is also the plane of reference for the charted depths. If the lake level is above or below Low Water Datum, the existing depths are correspondingly greater or lesser than the charted depths.

CAUTION

BASCULE BRIDGE CLEARANCES

For bascule bridges, whose spans do not open to a full upright or vertical position, unlimited vertical clearance is not available for the entire charted horizontal clearance.

SOURCE DIAGRAM

Most of the hydrography identified by the letter "J" was surveyed by the U.S. Army Corps of Engineers prior to 1974. Channels currently maintained by the U.S. Army Corps of Engineers are periodically resurveyed and are not shown on this diagram. Refer to Chapter 1, United States Coast Pilot.

Sailing courses and limits indicated in magenta are recommended by the Lake Carriers Association and the Canadian Shipowners Association.

POLLUTION REPORTS

Report all spills of oil and hazardous substances to the National Response Center via 1-800-424-8802 (toll free), or to the nearest U.S. Coast Guard facility if telephone communication is impossible (33 CFR 153).

AUTHORITIES. Hydrography and topography by the National Ocean Service, Coast Survey with additional data from the Corps of Engineers, Geological Survey, and U.S. Coast Guard.

BRIDGE AND OVERHEAD CABLE CLEARANCES. When the water surface is above Low Water Datum, bridge and overhead clearances are reduced correspondingly. For clearances see U.S. Coast Pilot 6.

SYMBOLS AND ABBREVIATIONS. For complete list of symbols and abbreviations see Chart No. 1.

AIDS TO NAVIGATION. Consult U.S. Coast Guard Light List for supplemental information concerning aids to navigation.

PLANE OF REFERENCE OF THIS CHART (Low Water Datum) 569.2 ft.
Referred to mean water level at Rimouski, Quebec, International Great Lakes Datum (1985)

CONTROLLING DEPTHS FROM SEAWARD IN FEET AT GREAT LAKES LOW WATER DATUM (LWD)						PROJECT DIMENSIONS		
NAME OF CHANNEL	LEFT OUTSIDE QUARTER	LEFT INSIDE QUARTER	RIGHT INSIDE QUARTER	RIGHT OUTSIDE QUARTER	DATE OF SURVEY	WIDTH (FEET)	LENGTH (NAUT. MILES)	DEPTH LWD (FEET)
ENTRANCE CHANNEL (A)	26.6	28.0	28.0	25.5	8-02	500	4(a)	28
ENTRANCE CHANNEL (B)	21.6	26.1	27.7	25.3	6-10	500	5	28
ENTRANCE CHANNEL (C)	19.4	25.6	24.8	20.1	6-10	500	5	28
ENTRANCE CHANNEL (D)	24.1	26.1	18.8	17.3	6-10	500-950	2	28
SECTION K - WEST WIDENING AREA (b)	N/A	N/A	N/A	N/A	-	0-480	1.18	28
THENCE TO TURNING BASIN (E)	20.9	18.6	18.6	19.6	8-02	400-100	2.65	27
LOWER TURNING BASIN (F)	21.0	19.0	17.0	12.0	11-03; 6-07	350	0.25	20
THENCE TO MIDDLE TURNING BASIN (G)	20.6	15.4	15.4	19.9	9-10	200-400	3.59	27
MIDDLE TURNING BASIN (H)	16.8	15.0	15.0	18.1	6-10	0-700	2.51	27
MIDDLE TURNING BASIN TO END OF PROJ. (I)	6.2	8.4	8.4	10.1	6-10	200	47	25
UPPER TURNING BASIN (J)	10.9	12.3	12.3	11.4	6-10	835	16	18

a. LENGTH VARIES DEPENDING ON THE LOCATION OF THE 28 FOOT CONTOUR IN LAKE ERIE.

b. WEST WIDENING (K) IS CONSIDERED PART OF SECTIONS (D) AND (E).

NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION

14847

83° 32'

41° 44'

41° 42'

TOLEDO HARBOR CHANNEL DEPTHS								
TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - REPORT OF MAR 2011 AND SURVEYS TO SEP 2010								
CONTROLLING DEPTHS FROM SEAWARD IN FEET AT GREAT LAKES LOW WATER DATUM (LWD)						PROJECT DIMENSIONS		
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UNITED STATES - GREAT LAKES
LAKE ERIE - OHIO - MICHIGAN

TOLEDO HARBOR

Polyconic Projection
Scale 1:20,000

North American Datum of 1983
(World Geodetic System 1984)

SOUNDINGS IN FEET

Additional information can be obtained at nauticalcharts.noaa.gov.

NOTES

PLANE OF REFERENCE OF THIS CHART (Low Water Datum) 569.2 ft.
Referred to mean water level at Rimouski, Quebec, International Great Lakes Datum (1985)
AIDS TO NAVIGATION. Consult U.S. Coast Guard Light List for supplemental information
concerning aids to navigation.
SYMBOLS AND ABBREVIATIONS. For complete list of symbols and abbreviations see
Chart No. 1.
BRIDGE AND OVERHEAD CABLE CLEARANCES. When the water surface is above Low Water
Datum, bridge and overhead clearances are reduced correspondingly. For clearances
see U.S. Coast Pilot 6.
AUTHORITIES. Hydrography and topography by the National Ocean Service, Coast Survey
with additional data from the Corps of Engineers, Geological Survey, and U.S. Coast Guard.

SUPPLEMENTAL INFORMATION

Consult U.S. Coast Pilot 6 for important supplemental information.

Sailing courses and limits indicated in magenta are recommended by
the Lake Carriers Association and the Canadian Shipowners Association.

Joins page 8

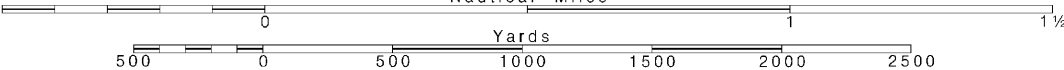
4

Note: Chart grid
lines are aligned
with true north.

Printed at reduced scale.

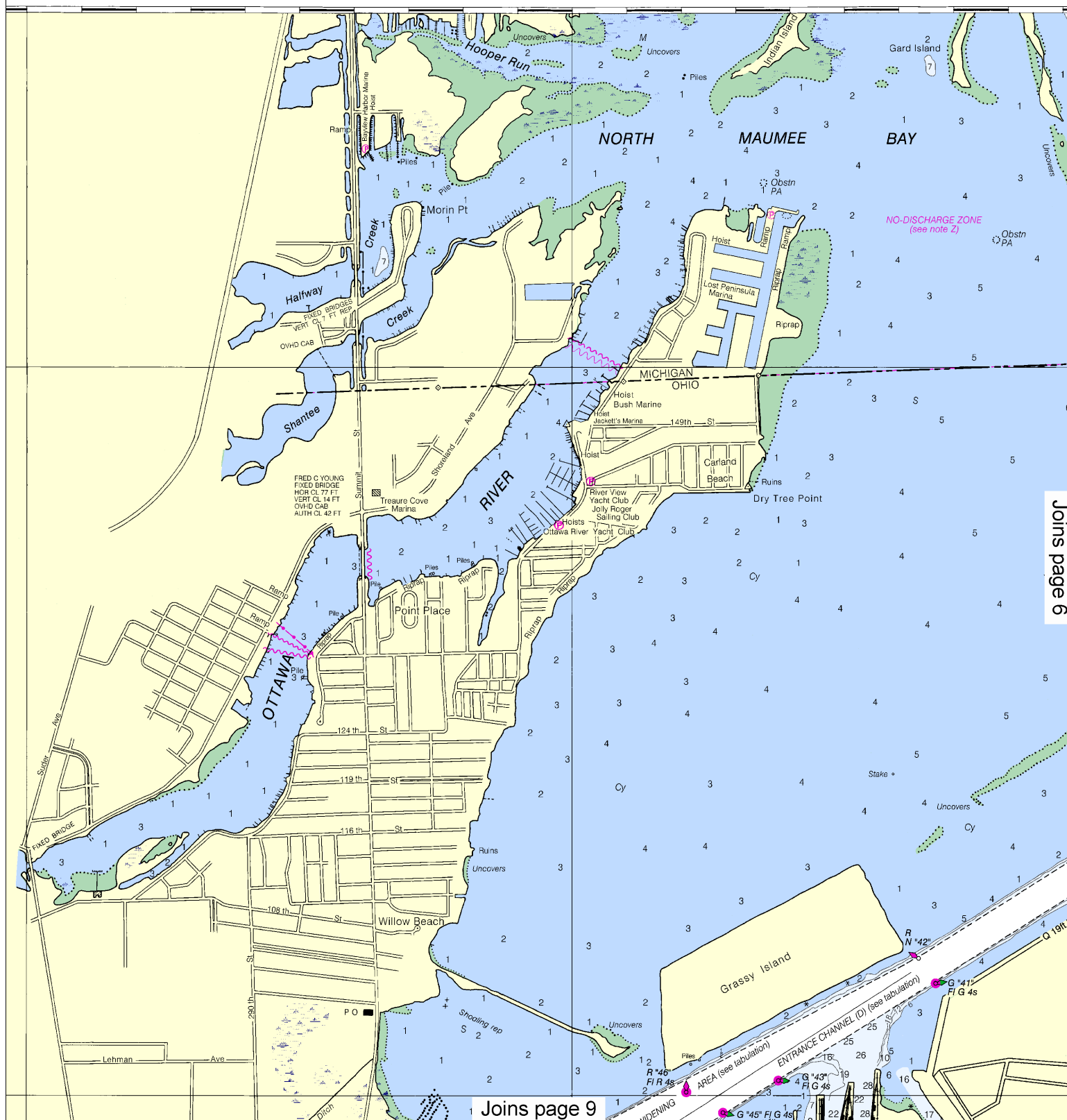
SCALE 1:20,000
Nautical Miles

See Note on page 5.



83° 30'

83° 28'



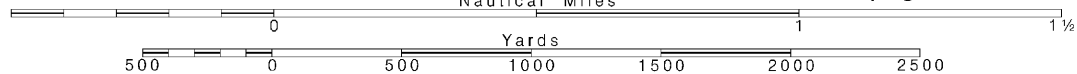
This BookletChart was reduced to 75% of the original chart scale.
The new scale is 1:26667. Barscales have also been reduced and
are accurate when used to measure distances in this BookletChart.

Note: Chart grid lines are aligned with true north.

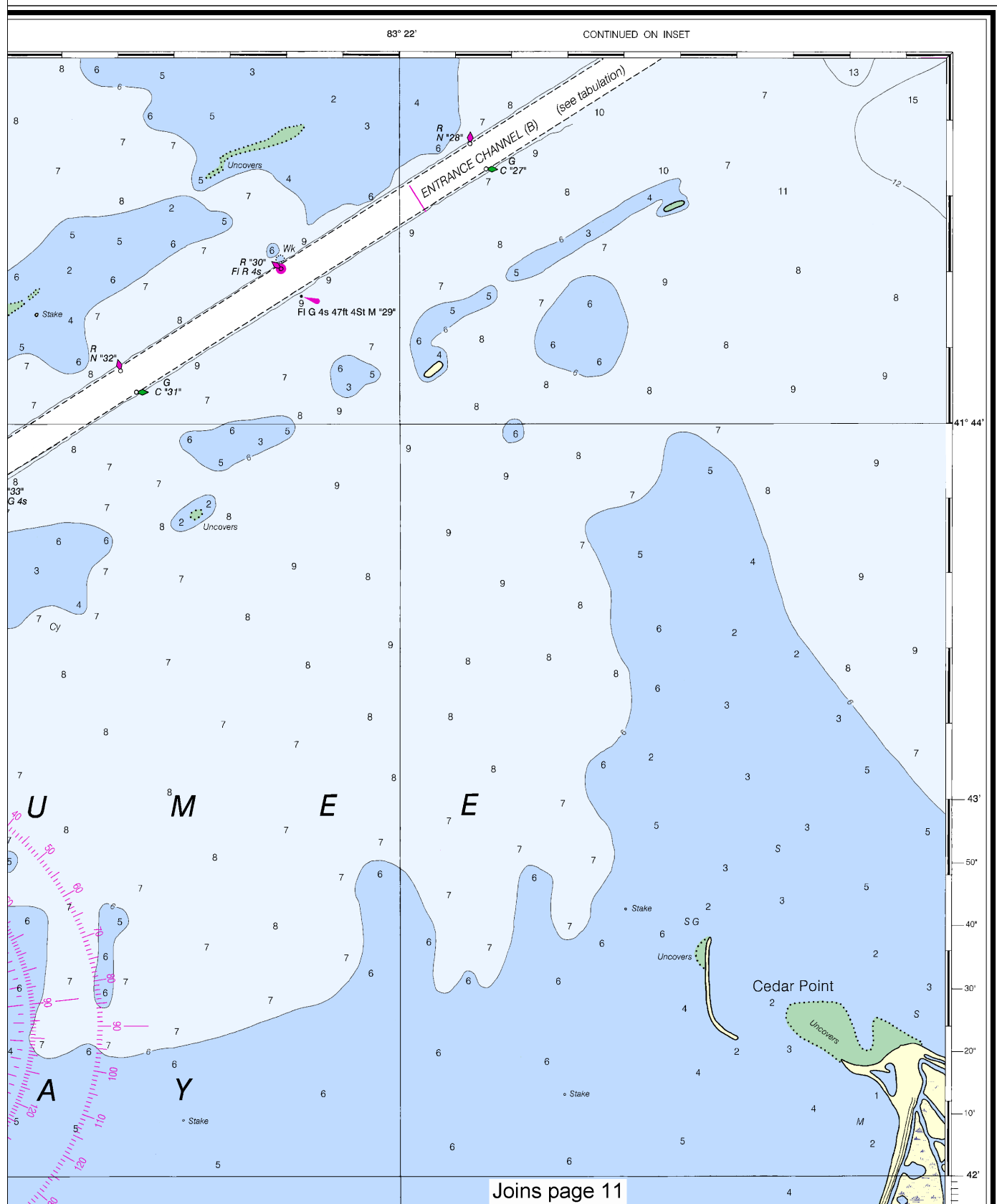
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~~SCALE 1:20,000~~
Nautical Miles

See Note on page 5.



SOUNDINGS IN FEET



This BookletChart has been updated through: Coast Guard Local Notice To Mariners: 5012 12/11/2012,
 NGA Weekly Notice to Mariners: 5012 12/15/2012,
 Canadian Coast Guard Notice to Mariners: 1112 11/30/2012.

Joins page 4

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HORIZONTAL DATUM

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CAUTION

BASCULE BRIDGE CLEARANCES

For bascule bridges, whose spans do not open to a full upright or
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 the Office of the District Engineer, Corps of Engineers in
 Buffalo, New York.

Refer to charted regulation section numbers.

WARNING

The prudent mariner will not rely solely on any single aid
 to navigation, particularly on floating aids. See U.S. Coast
 Guard Light List and U.S. Coast Pilot 6 for details.

(P) Pump-out facilities

NOTE Z

NO-DISCHARGE ZONE, 40 CFR 140

Michigan waters of Lakes Michigan, Huron, Superior, Erie
 and St. Clair, all waterways connected thereto, and all
 inland lakes are designated as a No-Discharge Zone (NDZ).
 Under the Clean Water Act, Section 312, all vessels
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 (treated or untreated) or install a holding tank. Regulations
 for the NDZ are contained in the U.S. Coast Pilot.
 Additional information concerning the regulations and
 requirements may be obtained from the Environmental
 Protection Agency (EPA) web site: http://www.epa.gov/owow/oceans/regulatory/vessel_sewage/

CAUTION

SUBMARINE PIPELINES AND CABLES

Charted submarine pipelines and submarine
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 are shown as:

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Covered wells may be marked by lighted or
 unlighted buoys.

41° 42'

41'

50'

40'

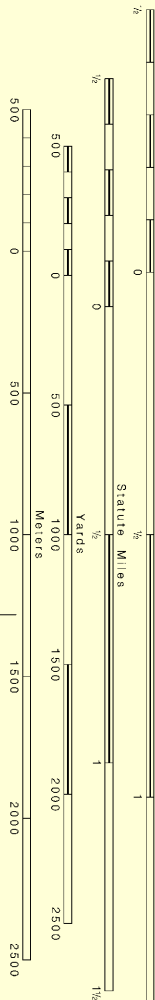
30'

20'

10'

40'

50'



SCALE 1:20,000

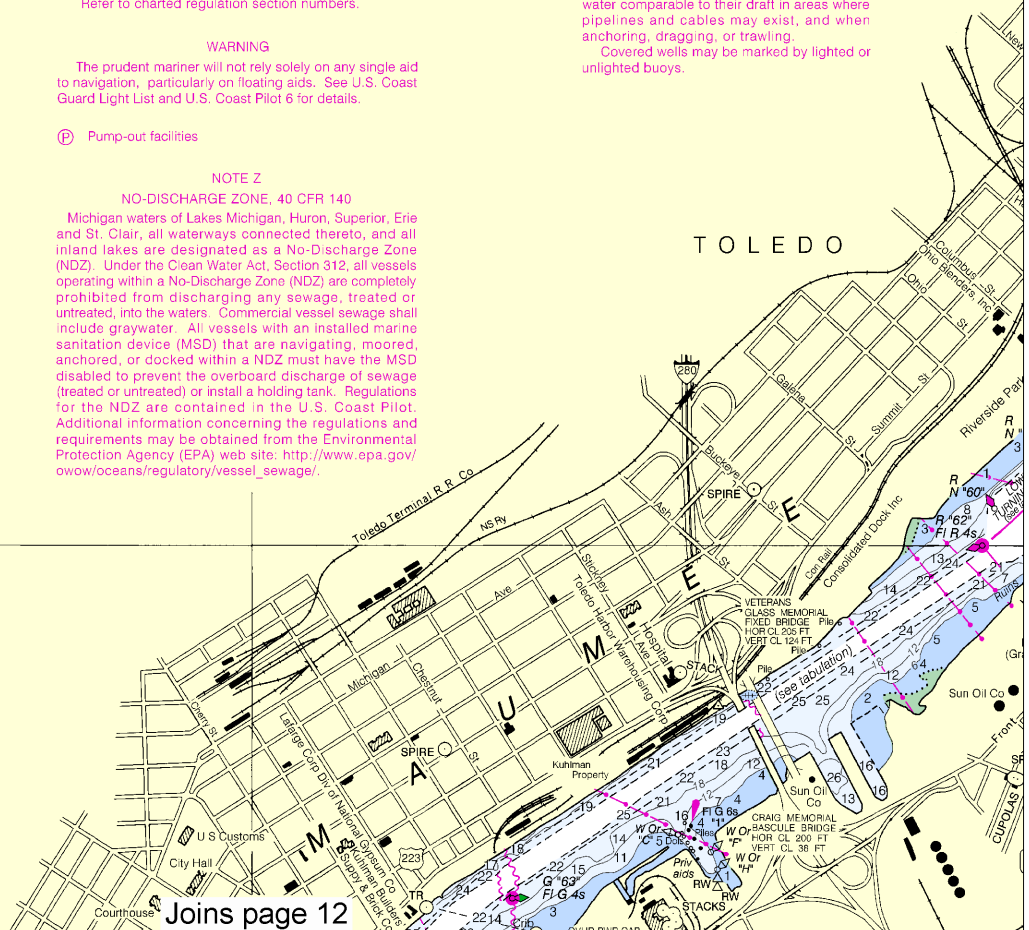
Nautical Miles

Statute Miles

Yards

Meters

TOLEDO

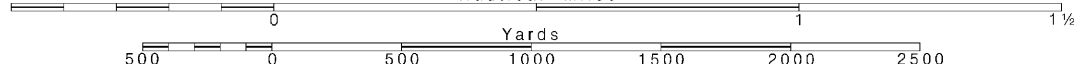


Joins page 12

Printed at reduced scale.

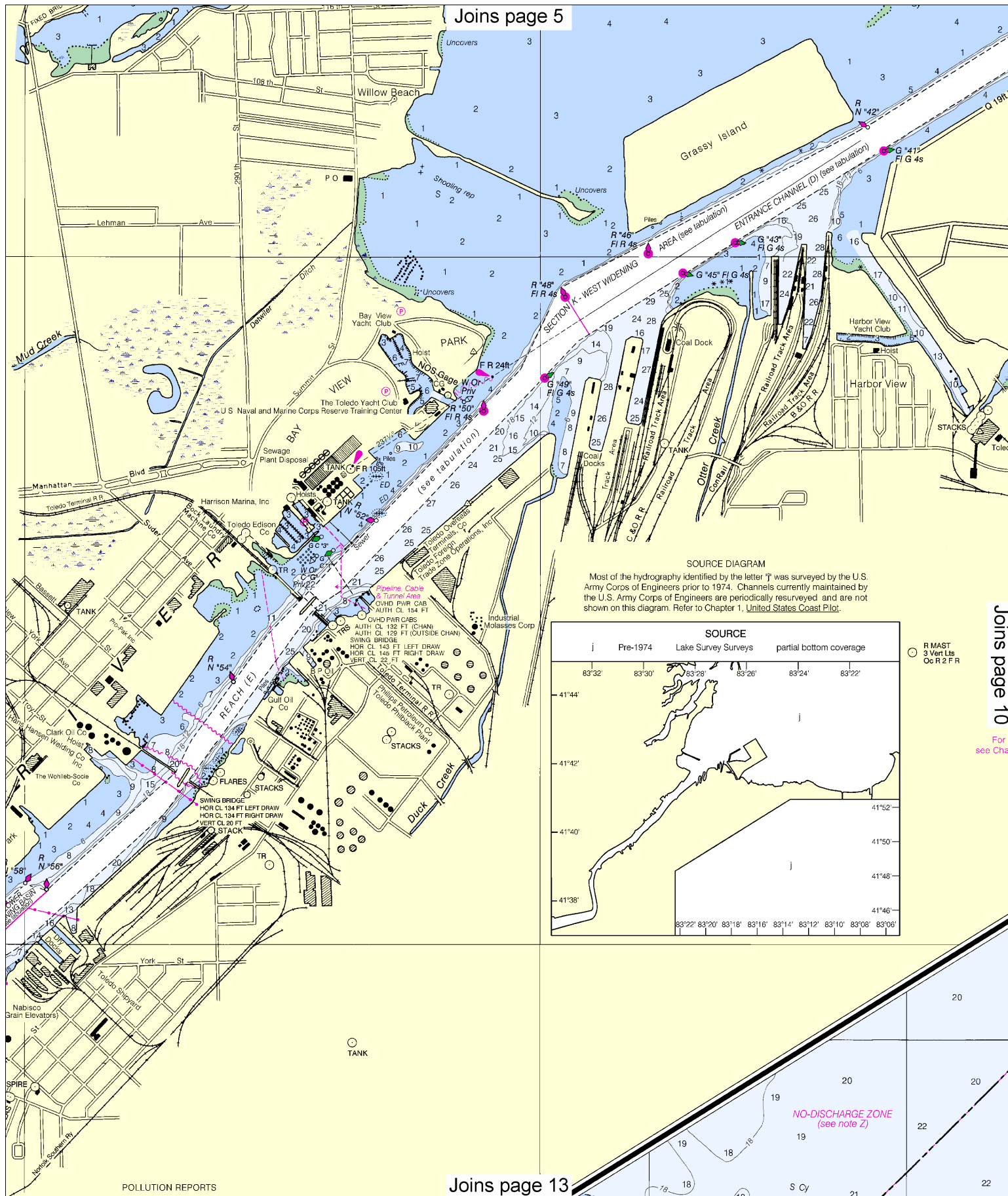
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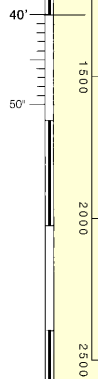
See Note on page 5.



8

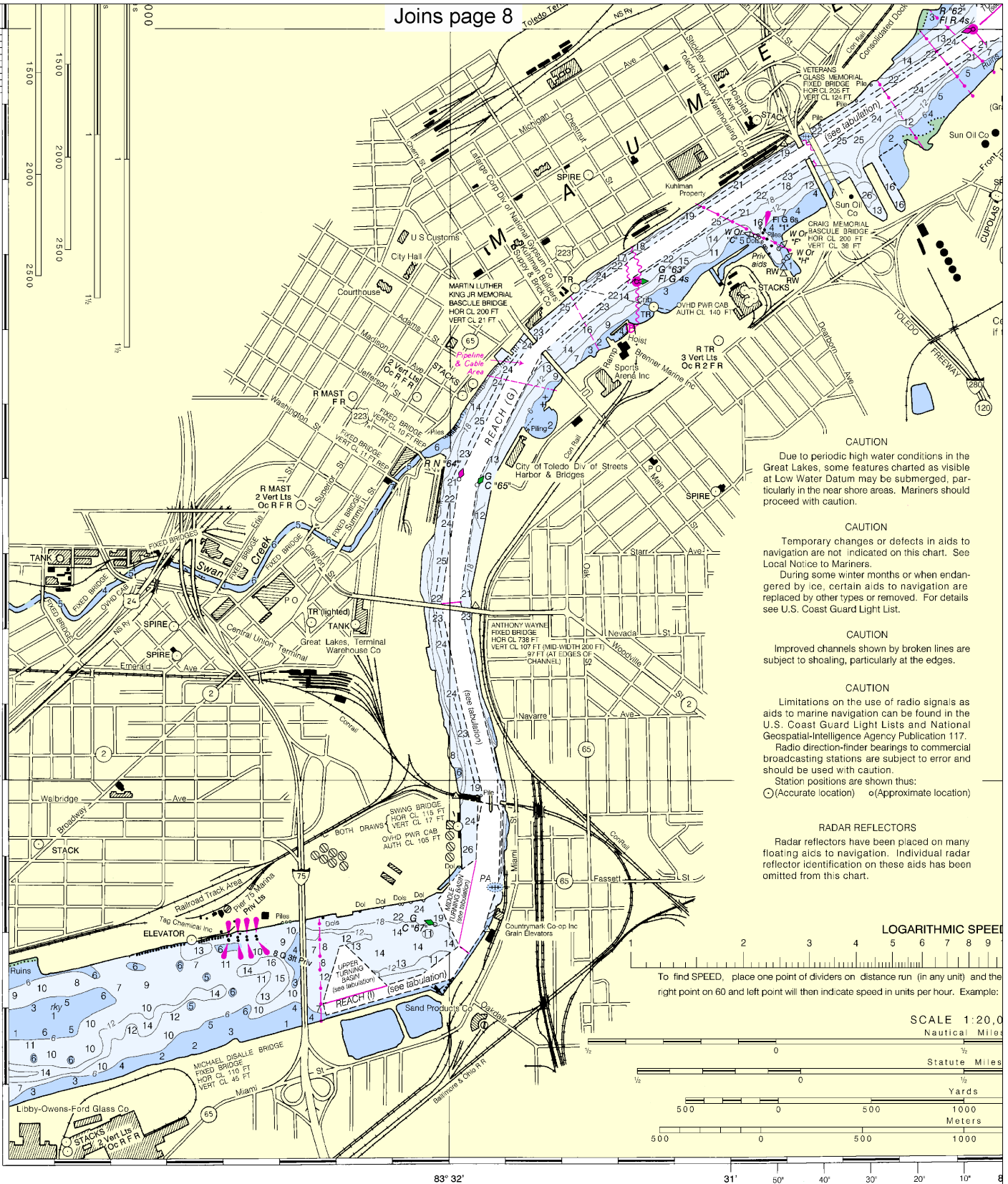
Note: Chart grid
 lines are aligned
 with true north.





41° 38'

CONTINUED ON CHART 14846



CAUTION

Due to periodic high water conditions in the Great Lakes, some features charted as visible at Low Water Datum may be submerged, particularly in the near shore areas. Mariners should proceed with caution.

CAUTION

Temporary changes or defects in aids to navigation are not indicated on this chart. See Local Notice to Mariners.
During some winter months or when endangered by ice, certain aids to navigation are replaced by other types or removed. For details see U.S. Coast Guard Light List.

CAUTION

Improved channels shown by broken lines are subject to shoaling, particularly at the edges.

CAUTION

Limitations on the use of radio signals as aids to marine navigation can be found in the U.S. Coast Guard Light Lists and National Geospatial-Intelligence Agency Publication 117. Radio direction-finder bearings to commercial broadcasting stations are subject to error and should be used with caution.
Station positions are shown thus:
○ (Accurate location) o (Approximate location)

RADAR REFLECTORS

Radar reflectors have been placed on many floating aids to navigation. Individual radar reflector identification on these aids has been omitted from this chart.

LOGARITHMIC SPEED

To find SPEED, place one point of dividers on distance run (in any unit) and the right point on 60 and left point will then indicate speed in units per hour. Example:

SCALE 1:20,000

Nautical Miles

Statute Miles

Yards

Meters

31st Ed., Feb. / 05 ■ Corrected through NM Feb. 19/05
Corrected through LNM Feb. 08/05

14847

CAUTION

This chart has been corrected from the Notice to Mariners (NM) published weekly by the National Geospatial-Intelligence Agency and the Local Notice to Mariners (LNM) issued periodically by each U.S. Coast Guard district to the dates shown in the lower left hand corner.

This nautical chart has been designed to promote safe navigation. The U.S. Coast Guard encourages users to submit corrections, adding or improving this chart to the Chief, Marine Chart Division (N/C Service, NOAA, Silver Spring, Maryland 20910-3282.

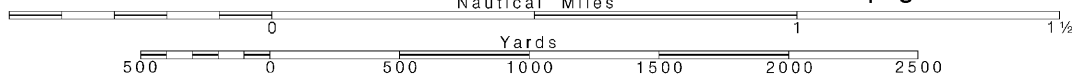
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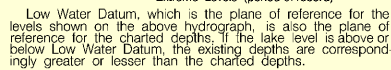
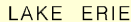
Note: Chart grid lines are aligned with true north.

Printed at reduced scale.

SCALE 1:20,000
Nautical Miles

See Note on page 5.



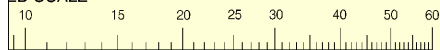


NOAA WEATHER RADIO BROADCASTS

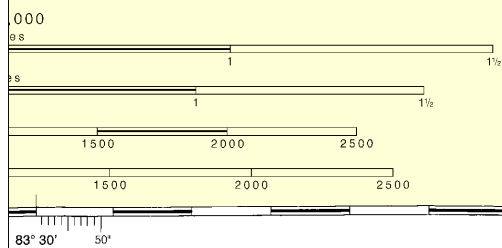
The NOAA Weather Radio stations listed below provide continuous weather broadcasts. The reception range is typically 20 to 40 nautical miles from the antenna site, but can be as much as 100 nautical miles for stations at high elevations.

Sandusky, OH	KHB-97	162.400 MHz
Adrian, MI	WNG-647	162.450 MHz
Detroit, MI	KEC-63	162.550 MHz
Toledo, OH	WXL-51	162.550 MHz

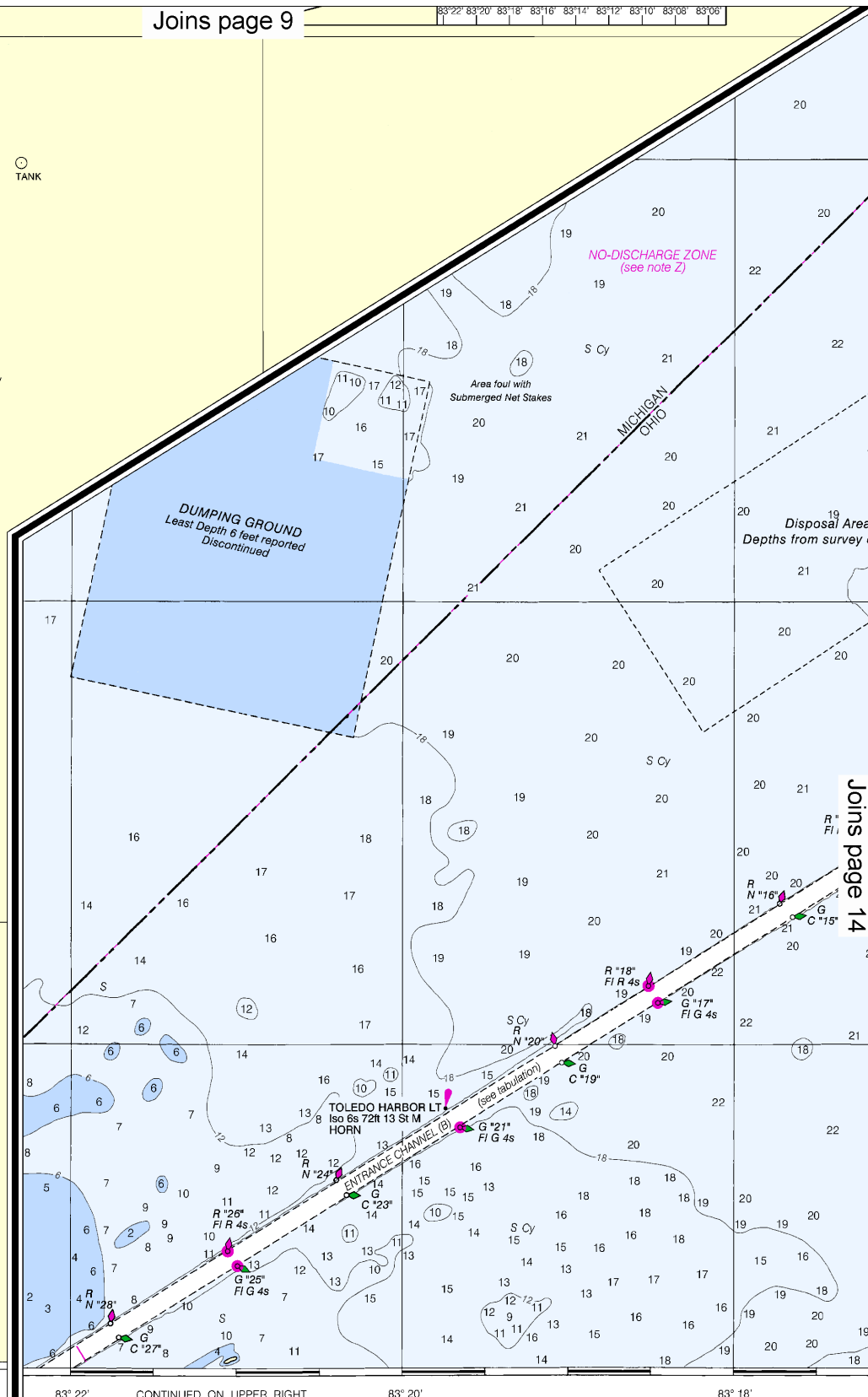
ED SCALE



the other on minutes run. Without changing divider spread, place
e: with 4.0 nautical miles run in 15 minutes, the spread is 16.0 knots

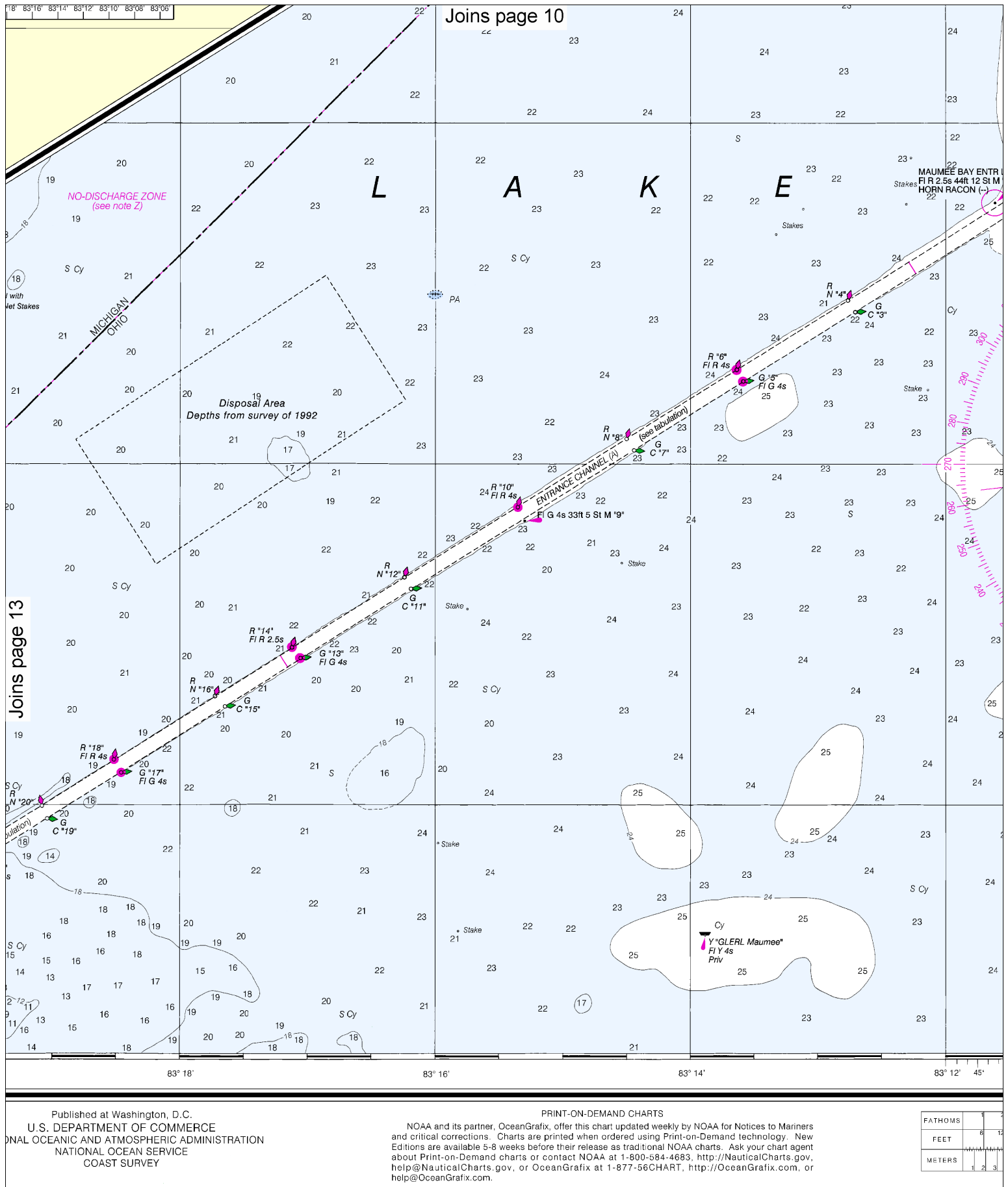


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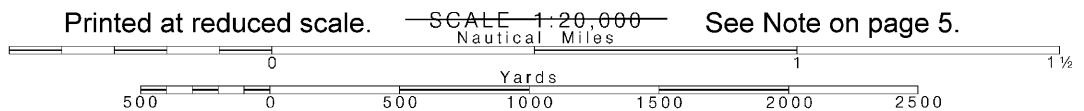


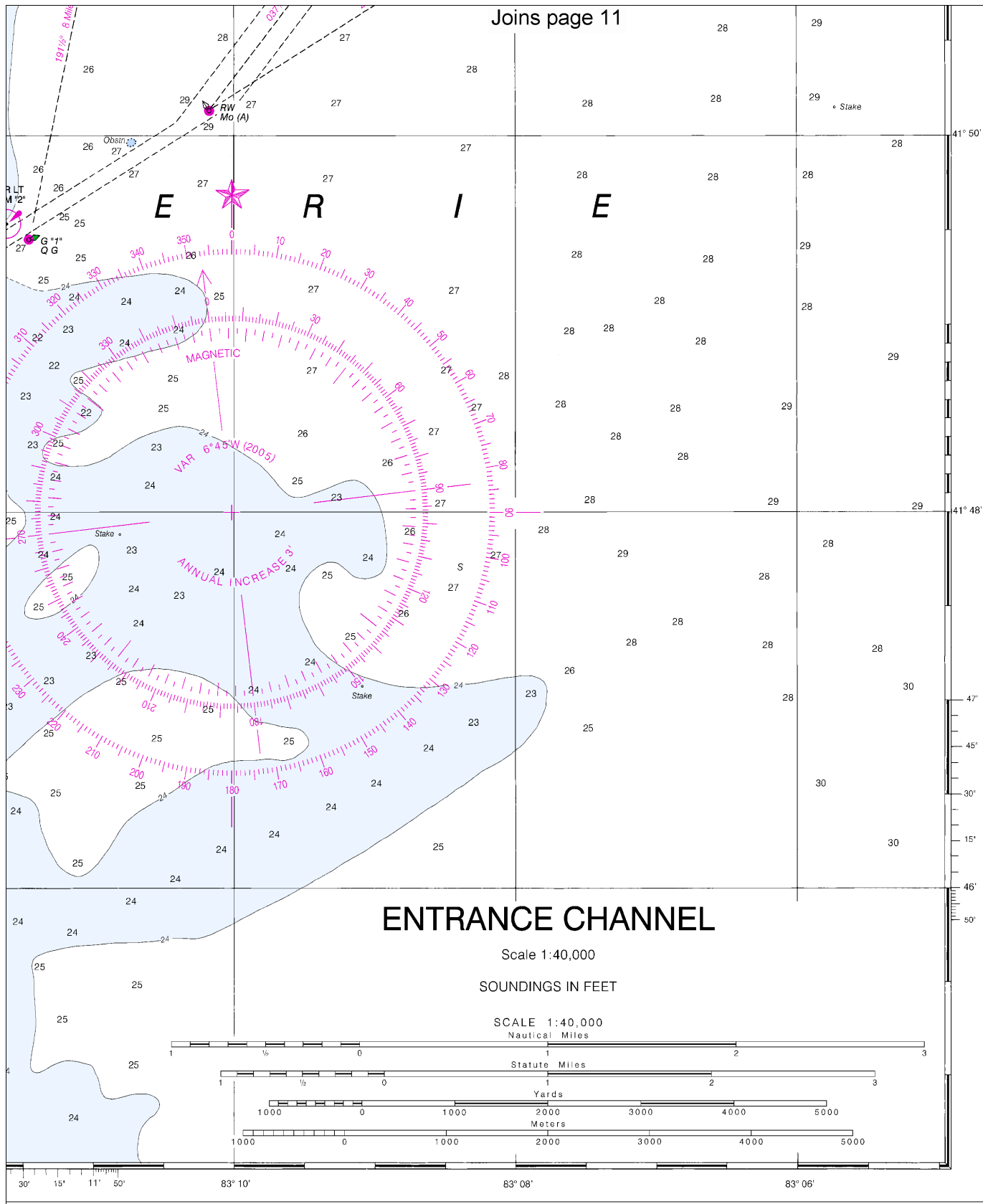
SOUNDINGS IN FEET

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NATIONAL OCEAN SERVICE
COAST SURVEY



Note: Chart grid lines are aligned with true north.





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VHF Marine Radio channels for use on the waterways:

Channel 6 – Inter-ship safety communications.

Channel 9 – Communications between boats and ship-to-coast.

Channel 13 – Navigation purposes at bridges, locks, and harbors.

Channel 16 – Emergency, distress and safety calls to Coast Guard and others, and to initiate calls to other

vessels. Contact the other vessel, agree to another channel, and then switch.

Channel 22A – Calls between the Coast Guard and the public. Severe weather warnings, hazards to navigation and safety warnings are broadcast here.

Channels 68, 69, 71, 72 and 78A – Recreational boat channels.

Getting and Giving Help — Signal other boaters using visual distress signals (flares, orange flag, lights, arm signals); whistles; horns; and on your VHF radio. You are required by law to help boaters in trouble. Respond to distress signals, but do not endanger yourself.

Distress Call Procedures

- Make sure radio is on.
- Select Channel 16.
- Press/Hold the transmit button.
- Clearly say: "MAYDAY, MAYDAY, MAYDAY."
- Also give: Vessel Name and/or Description; Position and/or Location; Nature of Emergency; Number of People on Board.
- Release transmit button.
- Wait for 10 seconds — If no response Repeat MAYDAY call.

HAVE ALL PERSONS PUT ON LIFE JACKETS!



NOAA Weather Radio All Hazards (NWR) is a nationwide network of radio stations broadcasting continuous weather information directly from the nearest National Weather Service office. NWR broadcasts official Weather Service warnings, watches, forecasts and other hazard information 24 hours a day, 7 days a week.

<http://www.nws.noaa.gov/nwr/>

Quick References

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Tides and Currents	—	http://tidesandcurrents.noaa.gov
Marine Forecasts	—	http://www.nws.noaa.gov/om/marine/home.htm
National Data Buoy Center	—	http://www.ndbc.noaa.gov/
NowCoast web portal for coastal conditions	—	http://www.nowcoast.noaa.gov/
National Weather Service	—	http://www.weather.gov/
National Hurricane Center	—	http://www.nhc.noaa.gov/
Pacific Tsunami Warning Center	—	http://ptwc.weather.gov/
Contact Us	—	http://www.nauticalcharts.noaa.gov/staff/contact.htm



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NOAA's Office of Coast Survey



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